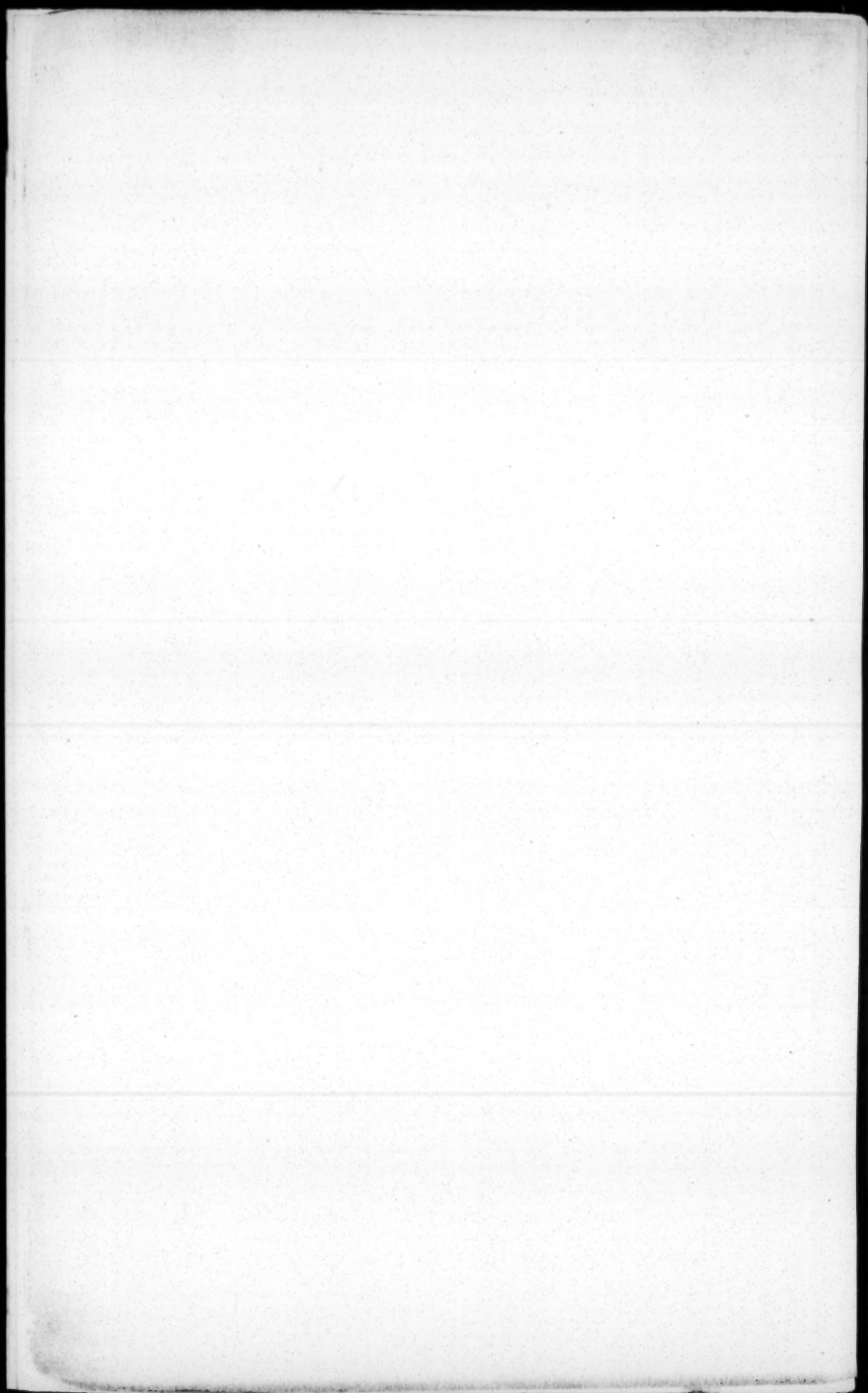




1023-4 F O U R 24 958
ESSAYS:

V I Z.

- I. On Making *China* Ware in *England*, as good as ever was brought from *India*.
- II. On a Method for furnishing Coals at a Third Part of the Price they are usually sold at.
- III. On the Repairing of *Dagenham*, or other Breaches.
- IV. On our *English* Grapes, proving that they will make the Best of Wines.

By a Society of Gentlemen.
by Aaron Hill 1718

For the Universal Benefit of
The People of *ENGLAND*.

Adorn'd with Four Beautiful Cutts.

L O N D O N.

Printed for J. ROBERTS, and Sold by R. Burleigh in
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London for J. Roberts. 1716.

Price One Shilling.



THE INTRODUCTION.



ON the first *Setting out* depends the *Fate of the Journey*; and therefore to obviate a Prejudice, which might easily happen, it is fit we shou'd give all our Readers *one Caution*, by way of Introduction.

We easily foresee, that it will be impossible for the Subjects we have chosen in this our First Book, to be equally pleasing to every Taste: Neither indeed cou'd any *other* have been so, which we might have pitch'd on in their stead. For it shou'd be consider'd, that the *Interests* and *Inclinations* of Men, are as various as their *Faces*; and that nothing was

ever so happily struck, but that *some* have dislik'd it.

Yet it were an Imprudence for a Man to conclude, that because the Essays we *begin with*, may happen to differ from his Relish, or be *out of his way*, that therefore *the Rest* will *continue* to be so. Our Work must consist of a never ending *Variety*: And besides, that a little Patience will certainly produce something fit for his Purpose, his Friends may be *pleas'd* in the Interim, and his Family *instructed* by Subjects, which are ever so wide from his own way of thinking.

There is more in this Caution than a Man at first View perhaps wou'd imagine; and to fix it the stronger in our Readers Opinion, we shall tell a *true Story*, not at all from our Purpose, and leave the *Application* to every Man's Judgment.

When Prince *Maurice* was Governor of *Brazile* for the *Dutch*, and encourag'd the falling into Sugar Plantations, an Inhabitant of the Colony was presented with a Book, which had been taken in a Prize, and contain'd an Account of some Progress in Experimental Philosophy, by a Professor of that Science in the University of *Salamanca*.

The

The Planter, not accusom'd to read or consider such Variety of Matter, and meeting, at his first looking into the Treatise, with a long Dissertation on the Nature of *Colours*, concluded the Subject to be *out of his Way*, and threw aside the Book, with the Negligence usual on such an Occasion.

It happened, a Year or Two after, that as this Planter was busied in his Sugar House, he was dangerously *Scalded* by the *Boiling over* of the *Liquor*, which kill'd a poor *Negro* outright, and from which he *himself* found it difficult to recover, after tedious and painful Confinement to his Chamber.

He was sitting one Day, as he began to be on the mending Hand, and took Notice, that a Lap-Dog in the Room was more busy than ordinary in *scraping* and struggling with his Feet, to get something out from under a Cabinet. His Wife rose to see what it was, and drew out *the Book above-mentioned*, cover'd over with Dust; having fallen by chance, and lain there forgotten and unenquir'd after.

The Planter, now, in more Composure of Mind than was usual, through his long want of Company, bethought himself that he wou'd dip here and there in the Book, and endeavour some Diversion from *that Entertainment*,

for want of a *Better*. Accordingly, he open'd it at random, and the first Page he fix'd on, began in this manner.——*From the foregoing Considerations it is easy to assign a good Reason for a very odd Effect, which the Planters of Sugar observe in their Boilers, into which, if they throw but a small piece of Butter, not much bigger than a Nutmeg, it infallibly keeps down the Liquor, which otherwise is often apt to boil over with a most sudden and dangerous Violence.*

It is easy to imagine he was startled, to light unexpectedly on a Hint, which concern'd him so *nearly*: He concluded however, that it was an improbable Fancy, and not worth believing; but his Wife, of a *Nature more curious and inquisitive*, gave Orders to their Overseer, for trying the *Experiment*, and found, to her Amazement, that upon throwing in the Butter, when the Liquor was just in its Fury of rising, it fell flat in a *Moment*, and continued to boil with a miraculous *Calmness*.

In short, this poor Secret has, from that time to this, maintain'd its Reputation. It has gradually spread through the Sugar Plantations of *Europe* and *America*, and is practis'd at this very Day by our *English* in *Barbadoes*, with never-failing Effect. But the Planters *past Smart* was renew'd, and made sharper, by
Reflection

Reflection on the Misery he had suffer'd through his *want of Curiosity*; since he had certainly found out the Secret *before*, and thereby *prevented* his *Misfortune*, if he had not too rashly rejected the *Whole*, because *Part* of the Book was not writ to his *Relish*.

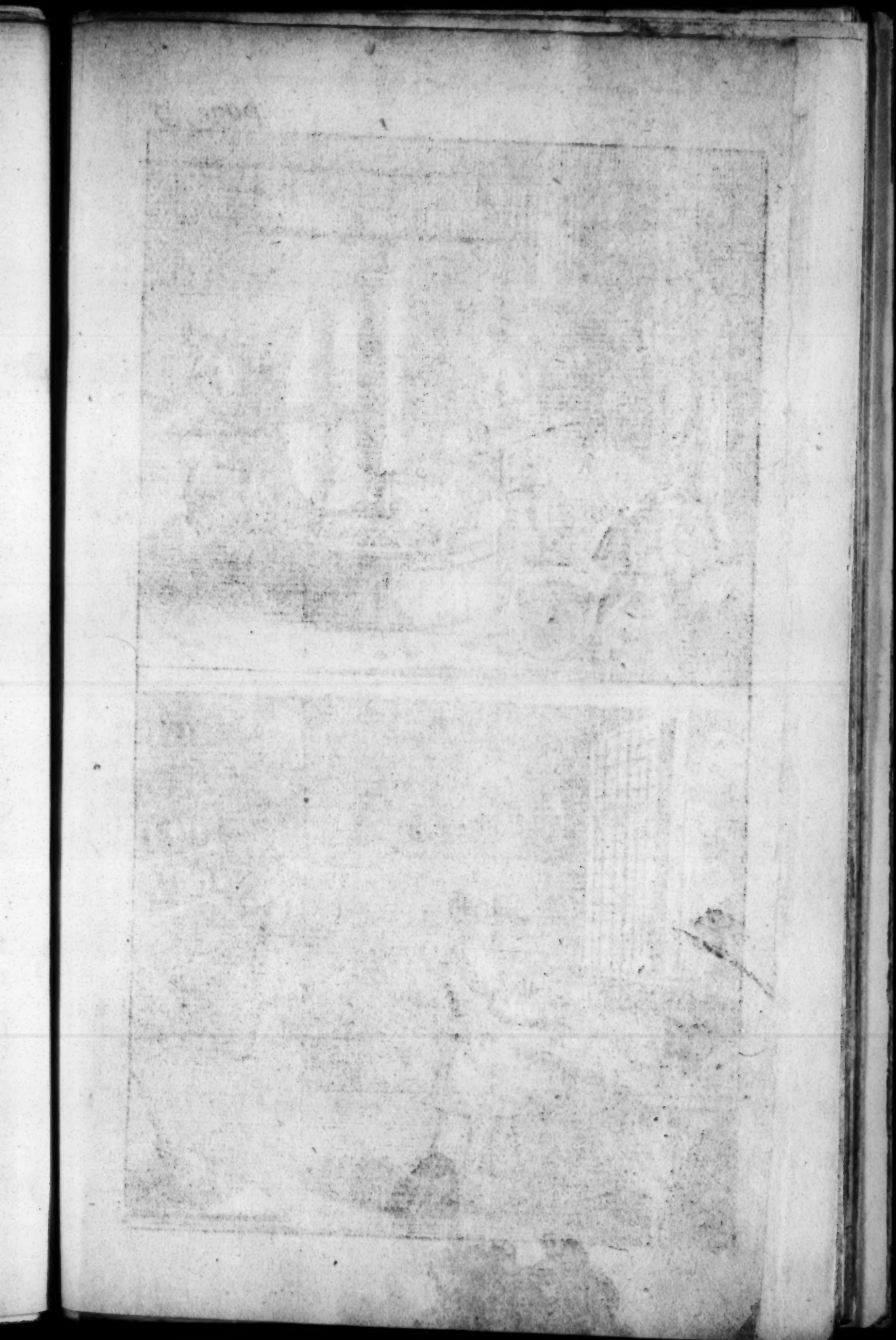
The Reader will presently see, what a *Use* we propose he shou'd make of the foregoing Example: Which having recommended once more to his *serious Reflection*, we go on with our Business; and begin the Design with the following Matter, in Respect to the Ladies.

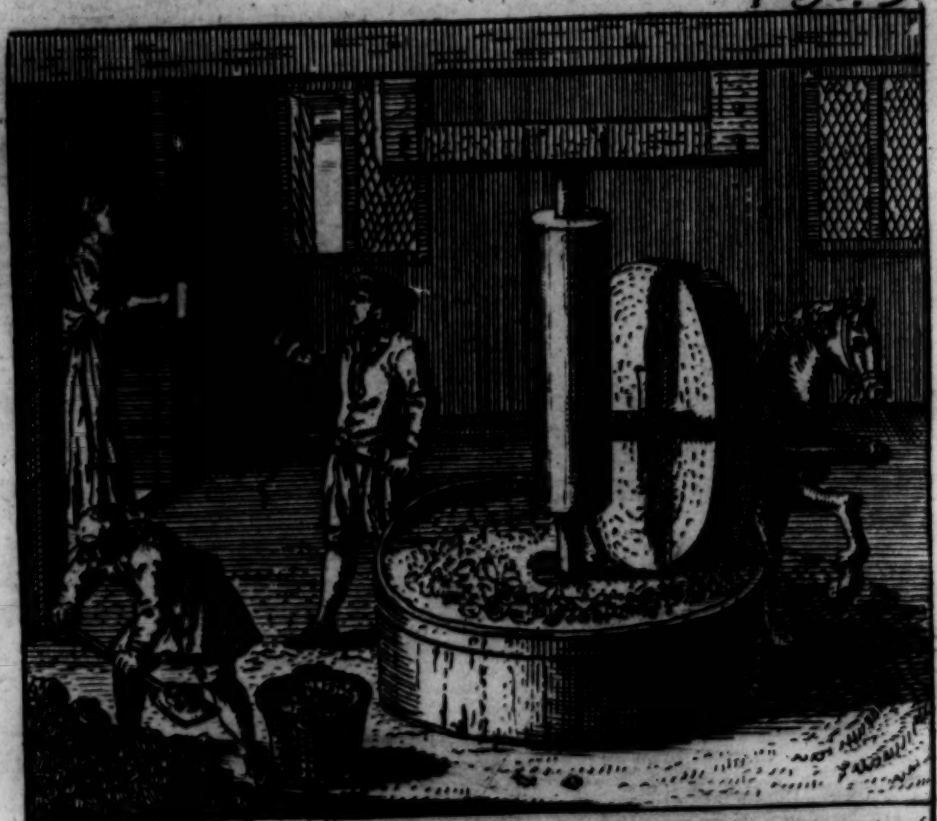


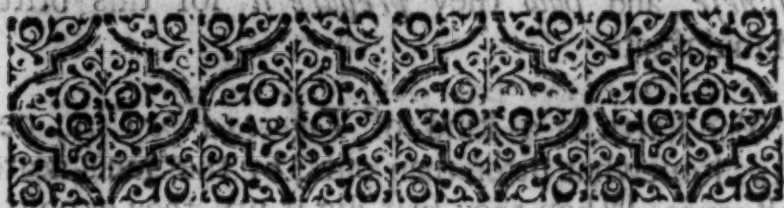
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ESSAY I.

IT has long been a Notion receiv'd as a Certainty, that they cannot make fine *China Ware* in *England*, or indeed in any other Countrey of the World, but in that part of the *Indies*, from whence it is brought us: And to back this Opinion with some Shew of *Reason*, we are told, that the *Chinese* themselves cannot make it, but of *one* kind of Earth only; and that *even the proper Earth* is unfit for the purpose, till it has lain for an Age or two *buried*; and that, as it draws nearer to its *Pitch of Perfection*, it *Yearly increases in Value*, and is left as a Legacy from Father to Son, till it reaches its *Period*.

We shall prove this Report to be nothing but Amusement, by instructing the most ordinary *Porter* in *England*, to make as fine *China* as ever was sold by the *East-India Company*; and that with such Ease, that it may be afforded almost as cheap as the commonest Earthen Ware. But we will begin the *Essay*, for the Satisfaction of Persons, whose Curiosity leads them to enquire after Things they are yet unacquainted withal, with a true Informati-

on *what Earth it is* they make use of among the *Chinese*, and *how they prepare it* for this brittle Manufacture.

The Earth is a kind of *Tobacco-Pipe Clay*, perhaps somewhat fitter than ours, by the Sun's nearer Influence. When they first dig it up, they expose it a while to the Air, and then work it with Shovels, and much treading of their Feet; after which they form it in *Molds*, as we do *Bricks* in *England*, but *smaller*, and bake it in *Ovens*, with a violent Heat from *Furnaces* below them.

These bak'd Cakes of Earth they *grind down to Powder* in *Mills* made on purpose: When the Powder is as *fine* as it can be made by that Process, they have recourse to the *following Contrivance*, to make it *still finer*.

They throw it into *Cisterns* of *Water*, and stir it about without ceasing, for an Hour or more: After which they let it stand just so long, as till the Surface is free from the *Motion* which their *stirring* had given it, and then let it out at a Tap near the Bottom: By which means, the *heaviest Particles*, sinking naturally down, the *fine* undistinguishable *Atoms*, which *float* in the Body of the Water, and colour it like Milk, are *drawn off with it*, into another large Vessel.

In this second Vessel, the Water is suffer'd to stand for a Week or Ten Days; in which time there is *settled to the Bottom*, a very considerable Quantity of a *Milk-white soft Substance*, of an inexpressible *Fineness*; which when they have obtain'd, by *drawing off the Water*, they work, and make
up,

up, as our *Potters* do *Clay*, but with a great deal more *Neatness* and *Nicety*.

Their *Cups* being *shap'd*, and *rough-made*, they let stand till half dry; and then with an Instrument of *Copper*, by rubbing them over, inside and out, they *polish* and *smooth* them to their *Fancy*, and replace them to dry, till they are fit to be *glaz'd*.

For the *Glazing*, they grind down that *snow-white Enamel*, which is commonly made by our *Jewellers* and *others*; and having purify'd it with *Aqua Fortis*, they prepare it by *grinding* on a *Painters Marble* with a little *Gum-water*, and so *Glaze* the *China*, and set it to *Bake* in the *Ovens* above-mentioned, where the *Fire* must be strong enough to make it red hot; and be suffer'd to go out, of it self, that the *China* may cool by *degrees*, which were otherwise in danger of *breaking*.

The next Thing they do, is to *Paint* the *Outsides* of the *Ware*, as we see it brought over. The *Painting* it self is no otherwise different from *Limning in General*, than in the way of *preparing the Colours*; which being form'd of the *variously-tinctur'd Enamels*, are dry'd in by *Fire*, in little *Furnaces* for the Purpose: But the manner of *Painting* on *Enamel* in all kind of *Colours*, being *common in England*, it is needless to teach its *Particulars*.

When the *Dishes* are *Painted* to the *Fancy* of the *Workman*, they are *once more* put into the *Furnace*, to *Bake* in the *Colours*; after which there remains no more *Work*, and the *China* is fit for the *Market*.

The

The foregoing Description contains the *whole Chinese Practice* in making this valuable Ware, from the first to the last; whence it plainly appears, that as we have *Potters, Enamellers, and Painters* in *England*, who can work in their Arts as well as the People of any other Nation whatever, there is nothing we can want for the *making of China* in its utmost Perfection, but the *Earth* 'tis compos'd of.

We have not, as yet, had a proper Opportunity, to *make the Experiment*; but we firmly *believe*, our *Tobacco-Pipe Clay*, bak'd over and over, and often *refin'd* by the Process before-mention'd, might be *capable of doing it*: And we are the rather inclin'd to propose it, from an Observation, which all Men may, every Day make, that the *Clay* of which *Tobacco-Pipes* are *made*, can, by no means, compare with the Clearness and Whiteness of the *Pipes themselves*; and yet those white Pipes attain that Improvement by *one Single Baking*.

But leaving the uncertain Effect of this *Conjecture* to the Trial of the Curious, we give you the following, as a *try'd and infallible Method*.

Let any good Workman in the Potters Profession, who would benefit himself by this Art, employ some poor People to buy up the *old broken China*, which every House can afford him. This Ware he must *grind in a Mill*, with a flat Stone and Runner. The Mill is a *common one*, and every-where to be met with. The Powder, when it comes from the Mill, must be further reduced
and

and *refin'd* by the Assistance of *Water*, in the manner which was just now describ'd.

The *gross Parts*, which *settle*, and *lie in the Bottom*, and are not drawn off with the *Water*, may be *dry'd*, and ground over again with new *Ware*, so that nothing is lost in this Practice. But the fine *Stuff*, or *Substance*, which will be got from the *Settling* of the *Water*, when let stand in the *Second Vessel*, must be mix'd with the *Fourth Part* of its *Weight*, of *Quick-Lime*, dissolv'd in *Gum-Water*.

The *Quick-Lime* here meant, must be *different* from the *common Sort*, and is made in a *Furnace*, of what *Size* you please, by no other *Labour*, or *Charge*, than *burning clean Oyster-shells*, as they do *Chalk*, in *Lime-Kilns*. Of this *Composition*, must the *Dishes* be made; and being afterwards *Bak'd*, *Glaz'd*, and *Painted*, in all which there is nothing *uncommon*, or *difficult*, you have *China-Ware* perfect, and finish'd, as that from the *Indies*: For indeed it is the same, both in *Figure* and *Substance*.

We have done with this *Part* of the *Subject*: And if any should object, that *none but a Potter can benefit by it*; they are answer'd, We began our *Essays* with a *Caution* to our *Readers*, that they shou'd not expect to be *all pleas'd at once*. Though, besides the great *general Profit* of such an *Improvement* in the *Nation*, the *Purses* of *most Men* will be sensibly serv'd, by reducing the present *extravagant Rates* of this *Fashionable Furniture*, and making some kind of *Amends* for its *Britileness*,
by

by giving a *Value*, even after 'tis broke, to that which is now, but *unprofitable Rubbish*.

We are sure no Objection can reasonably lie against putting in Practice so gainful, as well as so useful a Manufacture; unless it shall be thought a sufficient Obstruction, that when the Improvement is generally fallen into, the *Matter* it self, upon which it depends, will *fail them in Time*, because 'tis impossible (when the first Stock is consum'd) to be furnish'd with *broken China*, in Quantities proportion'd to the Call there will be for it.

We answer to this; 'twill be long before any such Want can take Place; and the *first Undertakers* will sufficiently benefit themselves in the Interim.

Neither is there any Reason to doubt, if our Hint of *refining Tobacco-Pipe Clay*, shou'd not answer our Hopes; but that when the making of *China* shall be common in *England*, the inquisitive Genius of our People, push'd on to due Search by a Prospect of *Profit*, will discover, in some Part or other of *Great-Britain*, as fine, and as capable *Earths*, as those of the *Indies*. And to shew the Distrusters, that this Expectation is no way *Chimerical*, we will tell them a Story, that may encourage such Endeavours.

In the Heat of the Second *Dutch War*, a Ship of that Country was wreck'd in a Storm on the Coast of *Norfolk*; one poor Sailor was all who escap'd of the Crew, and he made hard Shift to reach Land on a Piece of the Wreck.

Half dead with *Cold*, and the *Fatigue* of his *De-
liverance*; he crept to the House of a Neigh-
bouring Farmer; who, believing it unlawful to
shelter an Enemy, wou'd by no means be tempted
to give him Admission; so that driven to Extre-
mity, unknown, and helpless, he had no View
before him, but to wander up and down, in hopes
he might light accidentally on some more *Hospi-
table Dwelling*.

In a Lane which he pass'd through, he saw an
old Coat hung over a Gate; he look'd every way
round him to discover the *Owner*, but not seeing
any Body near him, and the Evening coming on,
he bethought himself that it might be of Use to
put on that Coat, while he threw off his wet
Cloaths to *dry*; so he took it from the Gate, and
withdrew towards a *Copse*, not far distant.

The Owner of the Coat was a *Ditcher*, then at
work pretty near; he saw the *Dutch* Sailor from
an opposite Hedge, coming over the Field, and
thinking he had *stolen* the Coat, he surpriz'd him,
on a sudden, and taking it from him, examin'd
him, in a Language he understood not the Mean-
ing of, *Who he was*, and by what Means he came
thither in so wet a Condition.

The Gentleman, for whom the Ditcher was at
Work, had formerly been a *Merchant*, and spent
much of his Youth with the *Hollanders*: He was
walking at that Time in the *Copse*, and being
disturbed at the indistinct Sound of a Jargon, half
Dutch half *English*, came out to the Field, and
unriddled the Matter.

He

He took Pity on the Misery of a Stranger, brought him home to his House, and refresh'd him with *Sleep*, and a warm *Sute of Cloaths*, and undertook to sollicit the Means of his *Return* to his Country.

The Merit of his Charity was overtaken in the Act, by a *Reward* as unexpected as the *Accident*. The Gentleman had at this Time employ'd a great Number of Workmen, in *draining* a large Track of *Meadow*, and finding in Discourse, that his *Dutch Guest* had some Skill in Business of that Nature, he took him out with him one Morning, and desir'd his Advice, in remoying some Difficulties, which his Drainers had met with.

When the *Dutchman* came into the Field, he stopp'd short with *Surprise*, at a Bank of *White Earth*, which had been cast up by the Diggers: The Gentleman demanded the Cause of his examining that Clay with such *Earnestness*; and was answer'd, that it was sold in his Country at extravagant Rates, to the Makers of *Delf Ware*, and fine Earthen Vessels, being brought down the *Rhine*, out of some Place in *Germany*, and very much coveted in all Parts of *Holland*.

The Gentleman, to make the best Use of this Hint, upon Conclusion of the Peace, which happen'd soon after, sent over a *Sample*, and finding the Sailor's Account to be *true*, he open'd the *Vein*, and dug up such a Quantity, as brought him in a Profit of *Ten Thousand pounds* in *Eighteen Months Time*. But the *Stack* was *exhausted*, and he never could find any more in his Lands, though

he diligently and frequently made it his Endeavour.

We hope the *Example of this Story* may have Power to influence the *Curiosity* of our *Gentlemen*: And the rather, because there are many Estates, now in *Mortgage* for above half their Value, whose *unfortunate Owners* walk every Day over Treasure enough to make them easy for ever, without knowing, or thinking of any such Matter.

To assist so desirable a Change, we will teach an infallible, easy, and cheap way, to discover what different Bottoms lie under all Lands; By which Means the Owner may often find out Marl, Chalk, Fullers-Earth, Tobacco-Pipe-Clay, Yellow Oker, or Red; Sea-Coal, or Quarries of Stone; any one of which may, in some Parts of the Kingdom, where they are wanted, be of Ten Times more Value, than the Estate, which conceals them.

You must order a Smith to make Six Iron Augers, or Borers, with each a cross Handle: They must be very strong made, and of a Thickness proportion'd to their Use. The Bottoms, or Bits of these Augers must be twisted Skrew-wise, like a Joiner's Gimblet, that they may always bring up some part of the Soil they shall Pierce. The first may be three Foot in Length, that a man may stand to, and manage it with Convenience. The second must be Six Foot Long, which being put down three Foot into the same Hole, when the first is drawn out, will be as easily managed as the other, and bore Three Foot deeper.

Then

Then the Third must go in, which is *Nine Foot* in Length, and the rest being each *Three Foot* longer than the other, the Earth may by this means be bor'd to what Depth you please; only remember to draw up the Augers every new Foot they Pierce, that the Bits may be narrowly examined; and by what you find in them, you are fully acquainted what *Earth, Stone, or Mineral*, lies under the Surface.



You must order *Six Iron* or *Barre*, with each a cross Handle; and of a Thick-ness to their Use. The Bottoms of the Augers must be twisted *Screw-wise*, that they may always of the Soil they shall Pierce *Three Foot* in Length, that a manage is with Con- sideration. *Six Foot Long* will be as easily put into the same *Three Foot* deeper. Then

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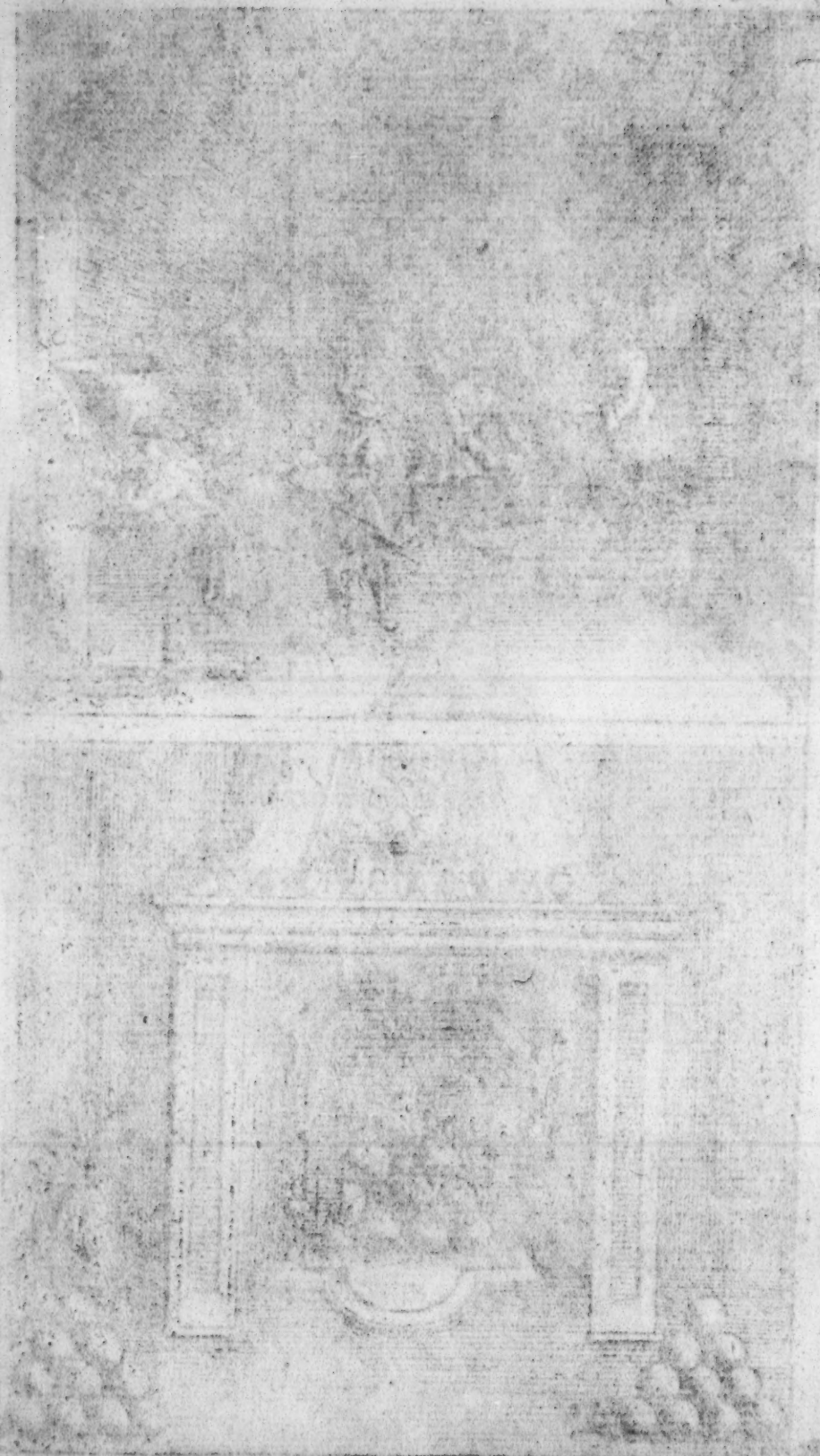
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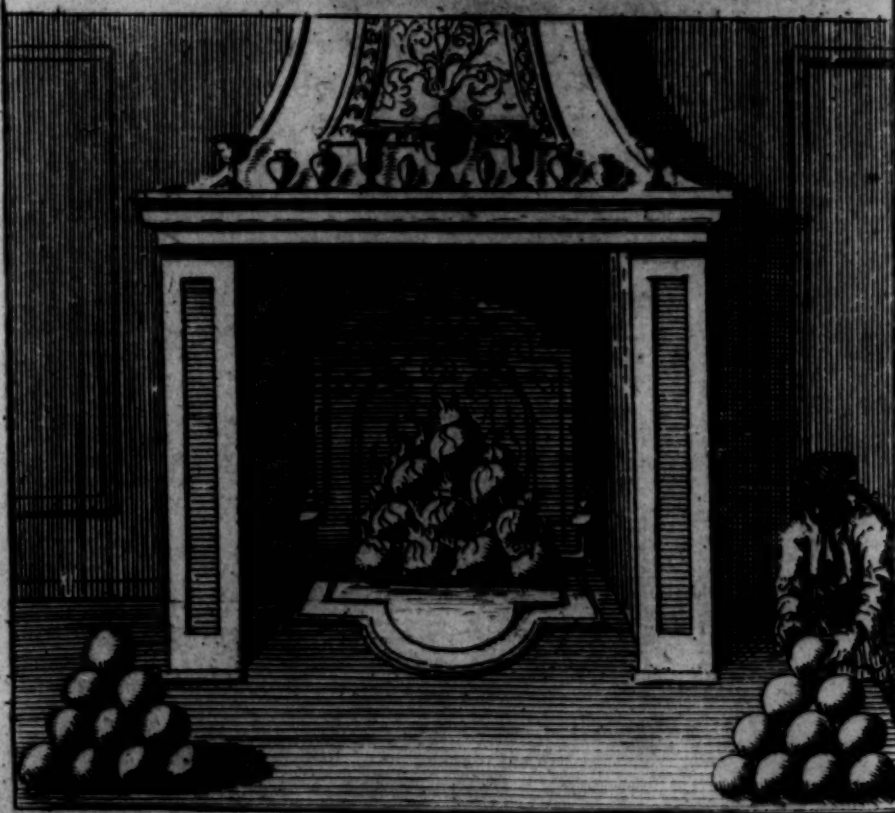
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ESSAY II.

HERE is not among the many *Complaints* in this City, any one that is *juster*, or more *common*, than that of the great *Price of Coals in the Winter*; by which means it sometimes has happen'd, that many *Poor People* have been nigh starv'd to Death, and Persons of *moderate Substance* considerably *Inconvenienc'd*.

We believe we shall do an *Universal good Work*, if we point out some Means for an *Ease to this Burthen*. And the rather, since there is not a *Family in London*, but may, with no further *Trouble* than the Labour of a *Servant*, continually furnish themselves with large Coal for Firing, as useful as *Scotch-Coal*, at a Third Part of the Charge they are now at for common *Sea-Coal*.

The *Expence*, which is necessary for beginning this Work, is very *inconsiderable*, in Comparison with the *Benefit*, and is but for *once*. After which the Materials are serviceable for ever, and require no Additional Charges. But People, who

can't well afford to lay out the Money, how little soever, they may without it perform all the Labour *by Hand*, and that with much Ease, in Regard they consume a *less Quantity* of Fuel.

But they, who are *able* and *willing* to be at the above-meant Expence, must give Orders to some *Iron-Millmaker*, to furnish them with a Mill somewhat *bigger*, and *stronger* than a *Malt-Mill*, but of the same kind of *Make*, with a Hopper upon it, which will hold a good deal more than a Bushel; the Figure of which you may see in the Cut.

This Mill should be plac'd in some Corner of the Coal-Cellar, and the Coals, which are laid in for the Use of the Family, may be just a *Fourth Part* of the Quantity, which they formerly burnt. And whereas it is usual at present, for People to chuse out the *largest*, and most *lumpy Coal* they can get; the fittest for their Purpose in this *new Improvement*, will be the *smallest*, and most *broken*, even, if possible, the very *Sifting* of the Wharfingers Coal-Heaps.

The Coal, when laid into the Cellar, must, as Leisure and Opportunity offer, be *ground down in the Mill*, by the Labour of some Servant, or a Workman, who may be hir'd for the Purpose. The Mill must be *set* so, as to grind very *fine*; for the smaller the Powder, the fitter for the Business. And if any Coals are too big for the Teeth of the Mill, 'twill be easy for the Workman to *break them* with a Mallet, and thereby reduce them to a Size more convenient.

While

While the Coal is thus Grinding, and laid up in a Readiness in one Corner of the Cellar, some Lightermen, Ballastmen, or Bargemen, must be agreed with for a Quantity of that *black Owse* *Mud*, which is common on both Sides the *Thames*, from Low-Water-Mark to the Banks of the River, and which may also be met with in all Ponds, Canals, and the Ditches of Gardiners, Whitfers, and Marsh-Lands, which abound beyond Number in the flat Grounds below Bridge.

It is to be noted, that, for the better Convenience of Carriage, the Owse may be thrown up to dry in round Heaps, above Highwater-Mark, by which Means, when the Lighters deliver it to Carmen, they may bring it in Sacks, or without, at their Pleasure.

When the Owse and the Coal are both ready in the Cellar, the Workman must mix them as follows: To every Shovel-full of the Powder of Coal, he must throw in Three Shovels full of Owse, and work, beat, and mingle them together, till he has got a large Heap in the middle of the Cellar. He must then make a Hollow in the Top of the Heap, and pour in a Quantity of Water, just enough to give Moistness and Consistence to the Mixture; after which, he must back, beat and labour it together with the Edges, and Back of a Spade, till 'tis thoroughly prepared, and will cut close like Wax.

He must then, with his Hands, make it up into Balls, about the Size of a *large Cannon Bullet*, and lay them to Dry, in the manner of *Pyramids*, that the Air passing easily through the Hollows, between Ball and Ball, may *harden* and fit them for the Use, they are made for.

For the better *comprehending* all this, we have represented the several Parts of the Work in a Cut, Number 2.

We have narrowly search'd, by Experience, into the Charges, and the Benefits of this new Fuel: The Expence in the *whole*, brings the *Culm-Balls*, when fit for the Fire, to less than *Four Pence per Bushel*, supposing the *Coals* to be furnish'd at the *best Hand*, and in the *Summer Season*; and yet, for *Pleasure*, for *Heat*, for *long Burning*, and *Cleanliness*, One Bushel of *this* is worth Two of *Sea-Coal*.

The Figure of a Fire made of *Culm-Balls*, is exactly what you see it in the Cut. The Owse is so *Far*, and so *naturally Combustible*, that 'tis impossible for any Thing to burn with so *striking a Liveliness*; it throws out a forcible, glowing, and regular Heat; it continues to burn from Six to Eight Hours, with scarce any visible Lessening: And it neither *falls out* through the Grate, like small Dusty Coals, nor makes any foul *Smoak*, or heavy dark *Ashes*, but goes off, to the last, with a clear sprightly *Brightness*.

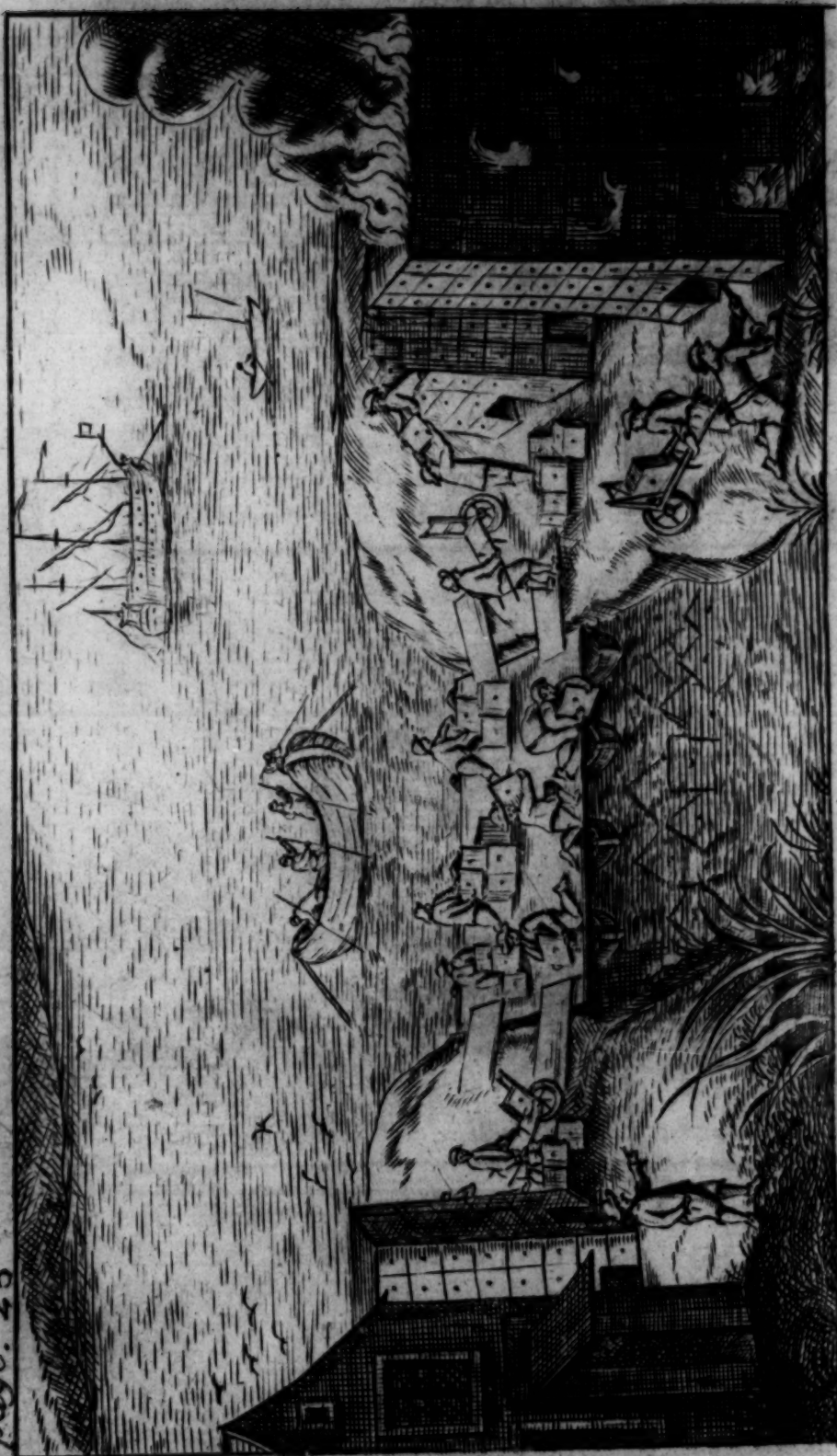
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Every Thing, we know, is a *Difficulty* to the Doubtful. And we are sensible (though nothing can be more Plain and Practicable) that *most private Families* will be backward in *changing a Method*, made easy, and establish'd by *Custom*. We therefore, in a more particular manner, recommend this Improvement to *Wharf-Men*, and those who *sell Coals*: They have very convenient *Situations* for the Business; for the *Ouse*, here requir'd, lies every where round them, and they may not only draw an unthought-of *Profit* to themselves from the Practice, but be also a Means of great *Service* to the *Poor*, and a *Pleasure* to all *Men*.

If ever the Use of this *new Sort of Fuel* shou'd gain Ground, and grow *general*, the City of *London* has, in its Neighbourhood, an inexhaustible *Magazine* of the *Ouse* we have been speaking of, which was occasion'd by the great *Breach at Dagenham*, which has, many Years, drown'd a large Parcel of *Land*, inasmuch, that at present there are Twelve Hundred Acres overflow'd every Tide, and all cover'd high with a new Surface of *Ouse*, whose extraordinary Fertility has shot up a Forest of *Reeds*, *Flags*, and *Rushes*, of a monstrous Height: And the Roots are so thick, and deep in the Earth, that for Eight or Ten Inches, the *Top* being pair'd away, and cut into *Squares*, of the Shape and Size of *half a Brick*, wou'd become, when grown dry, the best *Fuel* in the World, without *Mixture*, being *half Wood*, and *half Turf*; and as any Man, by *Computation*, will presently see, (supposing the Earth to be pair'd

but Six Inches down, which is not half what it has gain'd since the *Breach*,) the Fuel so obtain'd upon every Acre, would be more than *Ten Thousand Bushels*; which, at Three Pence per Bushel, were a Profit of above a *Hundred Pound* from each Acre, and the Land all the while not damag'd to the Value of a Farthing; so that a very odd *Paradox* might arise from the Accident, that the Owners of this Land might make far greater Profit by it, in its present ruin'd Condition, than they cou'd have reap'd, when it was at its best common Value.



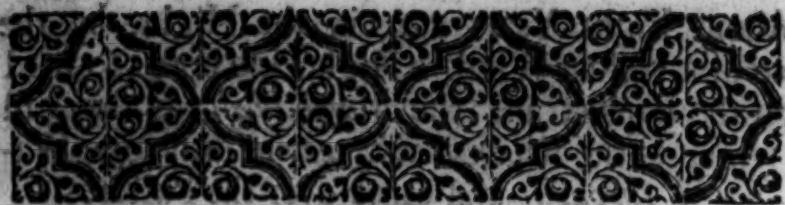


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ESSAY III.

HAVING touch'd an Occasional Prospect in the *Close* of the foregoing *Essay*, concerning a probable Profit to be made of the overflow'd Marsh-Lands at *Dagenham*, we shall, in what follows, propose a new, easy, and very cheap Method for *shutting up that Breach*; and not only that, but all others, which already *are made*, or which hereafter *may happen*, whether by Force of the *Sea*, or of *Rivers*.

We particularly aim this Discourse as a *Hint*, which may do Service to a worthy and ingenious Gentleman, who has, for some Time, been engag'd in a Work of this Nature at the Place above-mention'd; it being conceiv'd, upon rational Grounds, that this very Breach, when *at worst*, might have been *stop't* by such Measures, as we shall *lay down*, for less than a *Tenth Part* of the Charge, which it has occasion'd in vain, even before it was undertaken by the present Adventurer, whose Experience, and former Successes in Works of this kind, give us hopes it will *now* be accomplish'd.

About Eight Years ago, in the Night, by the force of a violent Wind, a High Tide bore too hard upon the Banks; and the *Marsh Wall*, as they call it, which is the *River Bank*, giving way, the Water flow'd through, and came over the Pastures.

The Neglect of this Breach, or the too weak and slow Progress, which was *then* made against it, gave the River a Power to enlarge its Invasions, till at last they became *irresistible*; and opening a Passage of a Hundred Yards wide, the Tide rushes through it with a *Swift*ness and Violence, which cannot be so much as imagin'd, but by seeing it. And the numberless *Fluxes* and *Refluxes* having worn away the Bottom to a very great depth, the Endeavours of several Gentlemen, at prodigious Expences, were too weak to withstand its *overbearing*: For the *Piles*, or huge Trees, with sharp Iron-shod Points, which they caus'd to be driven down, being sapp'd and undermin'd, by the letting in of the Waters at their Bottom, were born up on a sudden, and the *Chalk-stones*, *Bags of Earth*, and *Bank Rubbish* they supported, were of course wash'd away by the Deluge.

The Point to be gain'd, for effectually Inning this terrible Breach, is, to close up the Throat of its Channel with a Bank of such Strength and Solidity, as to bear all the Force of the Stream, while 'tis *Raising*, and the great Weight of Water, which will assault, and lie against it, when 'tis *Raised*.

To which End, the Reader may be pleas'd to take notice, that the natural Soil of the Place is an excellent *Clay*, and if a *Brick-work* were erected

on each side the Breach, they might make large strong Bricks of a new kind, on purpose, in Moulds of Two Foot Square, or more, with Holes here and there left through them in their forming, which would make them dry easily.

Such large Bricks as these are common in Italy, and frequently us'd in the Walls of their Castles. They deliver them at the Makers for about Five Pound the Thousand.

The Largeness of these Bricks, when made at the Breach, will be no way a hinderance to their Burning; for not only the Quantity of Fuel is proportion'd to their size, but the Holes, which pass through them, by admitting the Heat, make their Hardening as easy, as if they were smaller: And it is to be observ'd, that the purpose, for which we are making these Bricks, will require no Nicety of Colour; and they may therefore be burnt without Trouble, or Caution.

As the Earth for the Bricks is the Product of the Place, so also may be the Fuel for their Burning: The huge Reeds abounding, as we mention'd before, over all the drown'd Land, being cut up and dry'd, is the finest and properest Matter, which cou'd be wish'd for the purpose, and especially, as it may be assist'd by the tough stringy Substance, than which the whole World cannot yield a more excellent Fuel.

Thus, without the Expence, or the Trouble of Carriage, is provided what store can be wanted of these new Materials, and it only remains to discover their Uses.

In

In proportion to the Strength and Depth of the Water, must the *Breadth* of a *Bank* be design'd; In the Case we are speaking of, a *Hundred Foot* broad shall be pitched on as a Standard, and (*the Place for the Bank being chosen, and mark'd out*) exactly in the midst of the space 'tis to rise in, must be laid, as may be seen in the Cut, a strong *Float*, Floor'd with Deal, and built upon small Boats, or *Pontons*, and of Length enough to reach quite cross the Breach, kept exact to its Place, between *Piles on each Shore*, or by any other Means they like better, and easily *rising and sinking* with the *Flood* or the *Ebb*: The *Breadth* of the *Float* may be Fifteen or Twenty Foot over.

The Brick-kilns on either side the Breach, must, as you may see in the Cut, stand close to the Edge of the Chancel, for the more swift and easy Conveyance of the *Breach-stones*, as we will call them, to the Place of their Service on the *Float-Bridge*, which may be done in *Wheelbarrows*, as in the Cut, or by any other readier Method.

There must be several Workmen continually employ'd in *carrying the Breach-stones*, and others, who *apply them to their Use*, which last need not be more than *Twenty*; that is, one Man to every five Yards of the Length of the *Float*, supposing the Breach to be a *Hundred Yards* over.

These Twenty Men, standing every one in his proper place upon the *Float*, will have nothing to do, but to take up the *Breach-stones*, which are brought to them by the other Labourers, and roll them

them gently over the side of the Float *down into the Water.*

Their great *Weight*, for they are, as was said before, exact Squares of two Foot every way, which is *Eight Foot solid*, will, in spite of the Rapidity, and Depth of the Stream, carry them *down*, with very little sloping, *to the Bottom of the Channel*; and when they are *there*, the same weight will be sure to keep them *steddy*; and other *Breach-stones* falling presently after them, will lie either *near*, or *upon them*, and so as the *Number, let fall*, grows greater, the *Ridge*, they will make, becomes *higher*, and consequently *weaker*; and the Force of the Stream, gaining Power enough to *overturn* it, will do service to the *Work*: For the *Stones*, which are so overthrown by the Current, must fall sometimes to the Right, and sometimes to the Left, and they will by that means *always cover new Ground*, within the compass of the design'd Bank, and so *by widening the Work*, afford a Foundation for a Superstructure of the same kind, which by becoming *still broader and broader*, will at last be too strong for the whole Force of the Current.

It must be noted, that as these *Breach-stones* will fall and fix themselves, some upon their *Points*, others upon their *Flats*, and some again upon their *Edges*; so they will naturally leave large *Hollows*, and considerable Vacancies between Stone and Stone, of various Forms and Sizes: And, as the *Stream* in this, and all other Breaches, runs extremely *thick*, and *muddy*, all these hollow Places will be filled by the *gradual Settlings* of the *Mud within them*; by which means the *Bricks* will be *fix'd strongly* in their

their several Positions, and all join'd together, as a Wall is with Mortar.

This Use of the thick muddy Water will be much help'd and forwarded, if with constant Regard to the Current of the Tide, a *Liter* lies at Anchor, as in the Cut, at a reasonable distance from the Work, and several Men are employ'd on Board her, two or three times a Day, to stir and rake up the Bottom with long Iron-pointed Poles, that so the Water, being troubled more than ordinary, may convey among the Work a greater Quantity of the desir'd muddy Settlement.

It is plain, that in an Attempt of this kind, there could be scarce a Possibility of Miscarriage; for every Overthrow of the Bank, the Ruin of all common Works of this Nature, wou'd be an infallible means of increasing its Strength, till having attain'd the Breadth of about Eighty, or a Hundred Foot, it wou'd be afterwards impossible for any Force of Water to destroy, or weaken it.

On the contrary, the swelling and beating of the River against it, would become of Service to the Work, when 'twas finish'd, because every Tide wou'd of course leave a New Coat of Mud upon the Slope, as we observe on the steep shelving Shores of almost all great Rivers.

The Work it self may, after it is once begun, be carry'd on without Intermission, till compleated, Day or Night, Summer or Winter, High-water or Low, being equally fit for this Business: And a sufficient Quantity of the square Bricks being first provided, we conceive that in three Weeks, or a Month

Month at farthest, *Dagenham Breach* might be *securely shut up* by this easy method.

As for the *Charge*, it will be necessary that we say a word or two on that Head, for the Satisfaction of some Readers, who are not accusom'd to *Computations* of this kind, and possibly may *over-rate* it in their Random Conceptions.

The Reader may please to remember, what we declar'd in the foregoing Parts of this Essay, that in *Italy*, such Bricks, or larger, are us'd in the Walls of their Castles, and Under-ground Buildings, such as *Arches* and *Foundations*; and that the Price at the Makers is after the Rate of *Five Pound a Thousand*; and certainly that will be more than they can fairly be reckon'd at in our Case, when we consider that *Clay* for their *Making*, and *Fuel* for their *Burning*, the Two dearest Articles, are *here* to be had on the *Spot*, and that *Gratis*, which in *Italy* is very much otherwise.

If then we allow, that the Price of our Bricks will be *Five Pounds per Thousand*, it only remains to compute, *how many* the Work will require, and what Number of *Workmen*.

And because we will be sure not to *under-reckon* the Charge, we will imagine the Bank to be built like a *Wall*, close cemented together, and as wide at the Top as the Bottom; whereas on the contrary, such Banks are *sloping both ways*, and much *narrowest upward*; and the Breach-stones *not close join'd*, but kept *wide* by a very considerable Quantity of fat Earth between them. However, a Wall
 hundred Foot long, One Hundred Foot
 broad,

broad, and Fifty Foot high, (much more than is necessary) will take up in the whole, *One Hundred and Eighty Seven Thousand Five Hundred* such Bricks, which at Five Pounds *per Thousand*, will amount to *Nine Hundred Thirty Seven Pounds Ten Shillings*, for the Bricks, which will be necessary.

If it were possible (which it is not) to find a whole *Months Employment* for a *Hundred Day-Labourers*, in filling up the Breach with these Bricks, when prepar'd, their *Wages*, at the highest Rates usually given, wou'd fall under *Two Hundred Pounds*; and if, for the *Float*, and the necessary Hire of *Lighters*, and *Boats*, and such other *Expences*, *Three Hundred Pound* more be thrown into the Reckoning, it appears by as Rational a Guess, as can be given, that this Breach might be Inn'd with Security, and lasting Solidity, for a less Sum than *Fifteen Hundred Pounds*; and we are much misinform'd, if already there has not been laid out upon it *above as many Thousands*, without taking into the Account the Expence of the present Undertaker.

Having talk'd in this Essay of the *Brickmaker's Art*, we will embrace the Occasion to give a profitable Hint to the *Masons*, and *Bricklayers* of *London*, which may also be of considerable Pleasure, and Service to all Gentlemen, or others, who concern themselves with *Building*.

There is nothing more Graceful which, of late, has got Ground, in the Corners, and Window-work of new Houses with *Stone-work*: This Method would soon beget, not, that the great Price

the Trouble of their bringing to London, and their Hewing, and Squaring when here, were a Charge beyond most Mens good Liking, or Capacity.

But this Objection will no longer have Force, if we put our Town Builders in Mind of a way to procure *Artificial Stonework*, as cheap as their Bricks, and of much more Whiteness, and Beauty, than the best Stone now us'd in our Buildings.

This is easily done by preparing *white Clay*, as the *Pipemakers* do, and then casting it in Moulds, of what Bigness they please, either Square, or of any other Figure they fancy: After which they must Bake them to the requisite Hardness, and they will be glossy, white, strong, and durable, and not only lighter than Stone in the Handling, but immediately ready for laying together, without any Trouble of Cutting, or Polishing.

By the same way may be imitated *Plain Stone Pillars*, or *Fluted*, of any Bigness, or Order; and if a *Hollow* be left through the *Middle* in their Making, they will dry with much Ease, and be found of no small Advantage in Building. The Practice may be also apply'd to the Moulding of *Hearth Stones*, and *Chimney-Pieces*: And, if in mixing up the white Clay, they would mingle a Variety of Colours, such as *Yellow*, *White*, and *Red*, *Spanish Brown*, common *Indigo*, *Blue*, first dissolved in strong Lye, and scatter here and there the small Filings of *Brass* and *White Metal*, they might conceive what a Beautiful appearance it would imitate. But they must always take care to ram the Clay very hard

hard down into the Moulds they would form it in, because, upon that, depends chiefly the Polish, and smooth shining Surface of the Composition.

The *Bricklayers*, by causing their Bricks to be made, in like Manner, in *Moulds*, form'd with all the Embelishments us'd in their *finest Workmanship*, would save themselves the Labour and Charge of Cementing together huge *Lumps* of *Brickwork*, on Purpose that they may afterwards be able to *cut*, and *carve out* the Forms, which they might as easily by this Means *have them cast in at first*.

But the *Makers* of *Bricks* will doubtless be unwilling to go out of their Road; and may offer, by way of *Objection*, That it will be impossible to burn any Bricks to Perfection, which are made of such Thickness, and Substance, as will be requir'd to some kind of Mouldwork.

Experience is the fairest Confuter of Difficulties: And in Answer to any such Objections as these, we need only observe, That Sir *John Winter* did, long since, make Trial, and demonstrate, that 'tis easy to burn Bricks of any Thickness, or Form; as was plain from the huge *Earthen Backs*, and *Fire-Hearths*, which have been publickly seen. And as for the *Strength*, and *Duration* of such Works, it may plainly be affirm'd, from the Practice now frequent in *England*, of carrying *Water* a great way under Ground, in Pipes made of Earth, and well luted at the Joints; which are found to resist all Extremities of Weather; and though

though infinitely *cheaper*, are as Lasting and Serviceable as *Leaden*, or *Timber* ones.

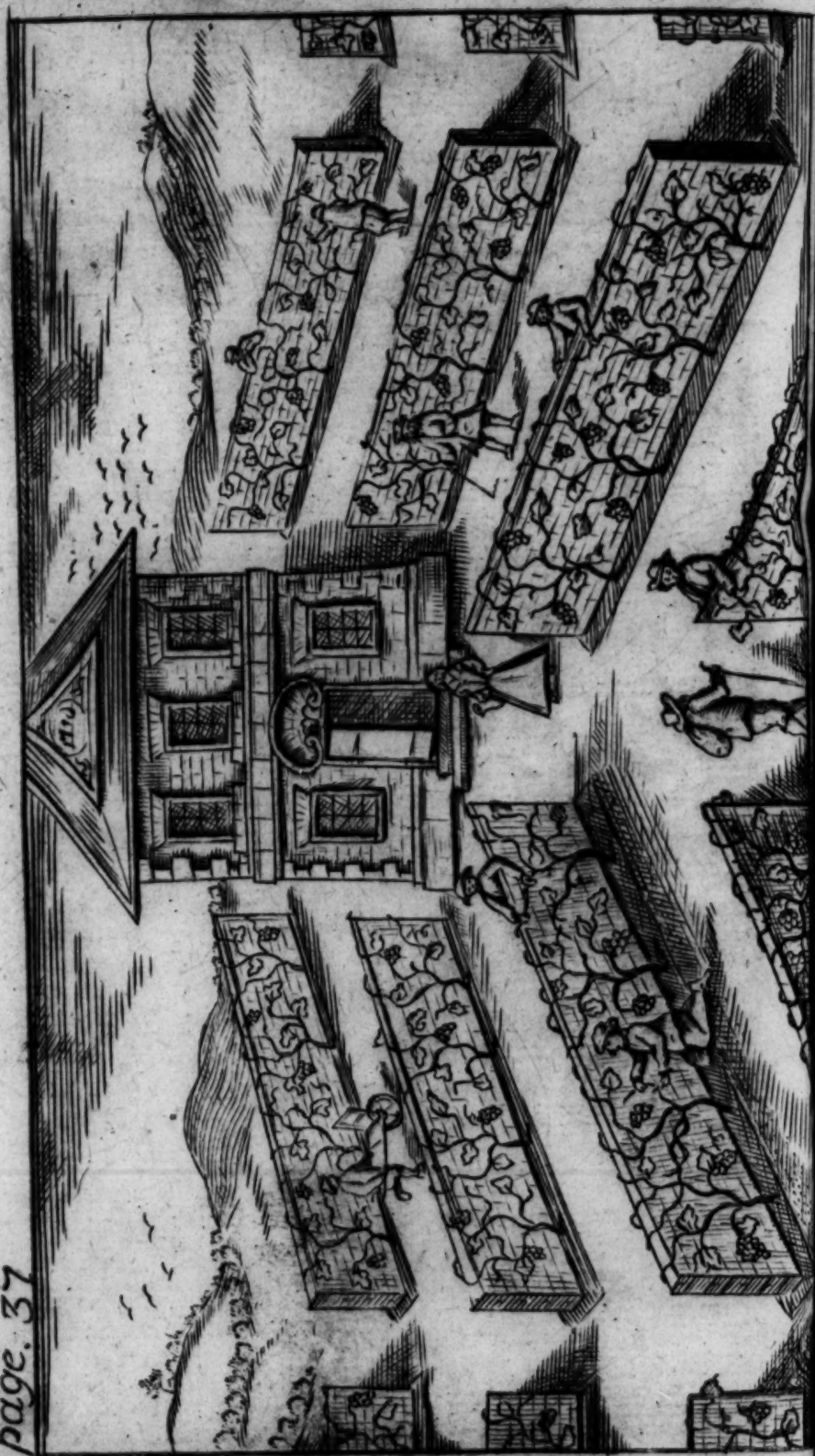
We may add to these Proofs, the *Barnstaple Ovens* of *Devonshire*, which are now made, and us'd in *some other Counties*; and being first form'd of common *Potters Clay*, in *one entire Piece*, are not only cleaner, and cheaper than any other Ovens, but bake with more *Evenness*, and *Certainty*, and consume *not a Fourth of the Fuel*, which is wasted in those of the ordinary Fashion in *London*, and *elsewhere*.



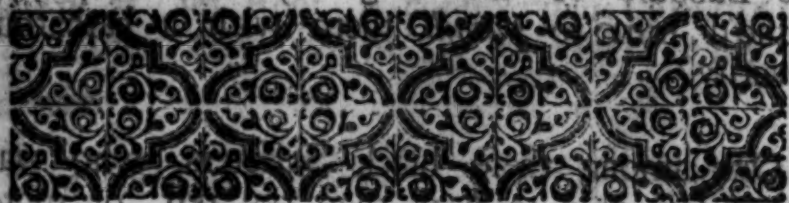
though infinitely cheaper, are as lasting and as
vicious as Lead, or Timber ones.

We may add to these Frocks, the Breeches
of Descent, which are now made, and
sold in great numbers; and being still
formed of common Frock Cloth, in our
view are not only cleaner, and cheaper than any
other Ovens, but take with more readiness, and
easily, and continue for a longer time, the
which is well as most of the ordinary Fashion
in London, and elsewhere.





His natural Disposition to keep up
his Stores, made him rigidly watching over
the Labour of his Negroes, and frequently



other less able to keep up the rest of his
apt to wander, far away from his Master's Plan-
tation, and rambling, Day and Night, through
the Woods, and will Covets of that thin-

ESSAY IV.

by the Grants of Light-Houses, who are sent
out to Plover up and down, upon all such



OUR Publishing the useful Instru-
ction, which composes this *Essay*,
was owing entirely to a very odd
Accident, which will be told you
in the Sequel, and which, besides
the particular Benefit, may afford us the Ad-
vantage of this General Application, That the
Negligence of Men is so great, and universal,
that CHANCE has a visible Hand in the
Discovery of every Thing Useful, or Ornamental
to Life.

Nor will it be an unpleasant Amusement, to
produce a most famous Example in the following
Story.

Gonsalvo Peralta, an old Spanish Merchant,
who resided in one of the Cities of Peru, was
equally remarkable for his Wealth, and his Ava-

rice : His natural Disposition to heap up his Stores, made him rigidly watchful over the Labours of his *Negroes*, and frequently induc'd him to *punish* them with a barbarous Severity.

One among these black Sufferers, who was either less able to *bear* than the rest, or more apt to *provoke*, ran away from his Master's Plantation, and rambled, Day and Night, through the Woods, and wild Coverts of that thin-Peopled Country, under constant, and terrible Apprehensions to be met, or overtaken by the *Guards of Light-Horse*, who are sent out to *Patrole* up and down, upon all such Occasions.

He imagin'd one Day, that he heard at a Distance the *Approaches of Horsemen*, and in order to avoid them, thought it safest to *climb up* a Mountain, on whose *Side* he was travelling, and which *rose* from that Place with a *horrible Steepness*: Accordingly, with infinite Difficulty, he was got to a very considerable Height, when taking hold accidentally of a thick, stubby *Branch*, which hung over a Rock, with Design, by its Assistance, to help himself higher, the Tree, by his Weight, was drawn out by the Roots, and together with the *Negro*, roll'd down with much Swiftness to the bottom of the Mountain.

The poor Wretch lay long without Motion, or Sense, (the Effect of his Fright, and some danger

dangerous Bruises,) but when he came to himself, he found his Hand *clos'd on the Branch*, which had occasion'd his Tumble, and perceiv'd at its Root a considerable Quantity of rich *Silver Oar*, which lay entangled with the *Fibres*.

He bethought himself, on a little Reflection, that this lucky Discovery of a Mine of that Metal, which his Master was so fond of, would procure him his *Liberty*, or soften at least the *Severity* of his *Usage*: With this View he *went back*, and giving full *Information* of the Accident, proper Searches were made; and to this *small Beginning*, the *Spanish Dominions* owe all the Wealth, which abounds inexhaustably in the famous, and so much envy'd *Mines of Potosí*.

We have shorten'd the Circumstances of the foregoing Relation, that we might not detain you too long from another, out of which, as we hinted before, we have taken Occasion to form the Essay we are about to present you.

Toward the End of that unseasonable *Autumn*, which happen'd last Year but one, the Wife of a Farmer, in that Part of *Kent* call'd the *Wild*, gather'd in a great Quantity of *Green unripe Grapes*, which the Sun had not Power to bring to Maturity; with Design to make *Verjuice*; and to that End she press'd, and prepar'd them, as is usual in making that Liquor; but whether the *Vine* was of a particular *Species*, or

the Grapes were grown *riper* than she thought them, or to what *other* Cause it was owing, is unknown: But when, after some Months *lying* by, she came to open her Vessel, and examine its Condition, the *Verjuice* she expected, was an excellent *Wine*, of a high sprightly Relish, sparkling briskly in the Glass, and as clear as Rock-Water.

This *perfect*, however *unexpected* Operation of *Nature* her *self*, gave some Gentlemen of our Society, a convincing Demonstration of what they had long believ'd possible, That *England* wants *Wine* of her *own*, not through any Defect in her *Climate*, but the Omission of due *Industry* in her negligent *Natives*.

The *Vintners*, and *Winecoopers*, will have Reason to thank us, if we furnish their Cellars without paying *Custom*. And the Owners of *Lands*, which are fit for this Purpose, will not scruple a Bumper of their *First-born* new Product, to the Health of our Society, if in the Course of this Essay, we make undeniable the following Particulars: That this *fortunate Island* is fitter than most Parts of *France*, for the Propagation of *Vineyards*: That, till about Six Hundred Years since, it was as common to make *Wine* in *England*, as it is now to make *Malt*: By what means it happen'd, that the Planting of *Vineyards* became *discontinued*: And how it may easily be *restored* to the general Practice, so that *Wine* may be afforded as *cheap*, as our *Ale* is at present.

In the first Place, 'tis true, that *some Parts* of France, such as *Orleans, Provence, and Languedoc*, (which are famous for *Wines*), are seated much nearer the Sun, and are fitter in other Respects, than most Parts of this *Island*. But again, there are some of the finest *French Wines*, which grow about *Paris, Beauvais, Diep, Arles, and Ruille*. And several of these Places (as may be seen in the *Maps*) are, as Northerly Seated, as the Latitudes of some Parts of *England*, particularly the *South-West of Devonshire*, about *Dartmouth*, and more especially the *Islands of Guernsey, and Jersey*. We need not mention some Tracks of the *Rhine, the Moselle*, and other Rivers in *Germany*, so famous for the *Old Hock, and Rhenish*, which are none of the worst *Wines* we deal in. It is plain, then, it is not our Distance from the Sun, which occasions this Deficiency: Let us see, if we owe it to our *Air*, or our *Weather*.

In both these Particulars we shall find an Advantage in our Favour: The Severity of the Winters in *France*, nay, in *Italy it self*, must be own'd to be visibly greater than in *England*, and their Frosts are so lasting, and so nipping, that 'tis no rare Misfortune, to find their Vineyards destroy'd by that Means, very forward in *April*. On the contrary, our Winters are mild, and our Frosts much less piercing; which Benefits we owe to the Grossness of our *Air*, and our Neighbourhood to the *Ocean*: Neither are we subject to those strange Storms of *Hail* in the

the *Summer*, which are common in all the *hot Countries of Europe*; and sweeping, with a kind of *Pestilential Sulphur*, over great *Tracks of Land*, destroy all the *Grapes* in their *Journey*: We are liable, 'tis true, to a good deal more *Rain* than the *Continent*, and superfluous *Moi-
sture* must be own'd a great *Enemy* to *Vine-
yards*: But that *Inconvenience* may not only be avoided by the *Manner of our Planting*, but is infinitely more than *atton'd for* by our various *Advantages*.

Thus 'tis visible, that as to our *Latitude*, and the *Temperature of our Climate*, we are no way behind-hand with some of those *Countries*, from whom we supinely content our selves to be furnish'd with *Wines*, at what *Rates* they think fit to impose. But it is a remarkable *Flaw* in the *Genius of our Nation*, to distrust new *Improvements*, and believe nothing *easy to be done*, which is *not done already*; though perhaps 'tis a *general Error*, and infects *Foreign Countries* with an equal *Stupidity*. And our honest *Unbelievers* may keep themselves in *Countenance*, by remembring the *Story of the Old Roman Sol-
diers*, who were sent, as a *Colony*, to govern *Alsatia*, a most *Fertile*, and *Southerly Province of Germany*. These merry *old Topers* had a *No-
tion*, by some *Means* put into their *Heads*, that no *Vines* could grow in a *Climate so cold*, as that they were going to, and therefore they *Muti-
ny'd* against their *Commanders*, who, with no small *Difficulty*, brought them to believe, it was possible to cultivate *Vineyards* in *Alsatia*, as well as in *Italy*. But *Experience* convinc'd them as
soon

soon as they try'd; and from that Time to this, the best Vines in *Europe* abound in that Country; from whence they have spread many Hundred Miles more to the *Northward*. A Man might pleasantly argue from hence, that the *Germans*, and *Italians*, ow'd much of their Valour to the good *Wine*, they drank of; which we offer as a Hint, to be made use of on Occasion, when it shall be objected to some honest Soldier over his Cups, that an *English Man* can't fight without *Beef in his Belly*.

But seriously to return to our Subject: Other Nations take Advantage to expose us unjustly, and ground their Reflections on our own Misrepresentation of our Country's Fertility: What fairer Example of this can be given, than a silly Observation we meet with in a French Book, Entituled, *The Political Treasure*; so notoriously false, that 'twere downright ridiculous to go about to confute it? It is true, says this Author, that their Island of *England* abounds with good store of *BUTTER*, *HARD CHEESE*, and *BLACK CATTLE*; nor do they (being Peopled but thinly) find any want of *BREAD-CORN* among them: But were they to endeavour to propagate the Conveniences and Superfluities of *FRANCE*, they are modest enough to *CONFESS*, 'twou'd be labouring in vain: And this, among their other Misfortunes, is a remarkable Deficiency, That *HOPS* can by no Art whatever be brought to grow with them. It is no wonder, that the French think our Country incapable of *Vineyards*, if they

they will not allow the Poor *Hop* to find Nourishment among us.

But now, from the *Reason* we will come to the *Fact*, and prove, That, in old Time, Vineyards actually did thrive in England. To this Day there remains, in all Parts of this Nation, the old Name of *Vineyard* to pieces of Land, which have never in the Memory of Man been employ'd to that Use; whence 'tis natural to argue, that they formerly were what they now bear the Name of. This, however, will pass for no more than a Presumptive Evidence; and the Laws of our Country require clear and positive Proof, before Judgment.

The learned Mr. *Cambden* quotes several Instances, to prove that many Hundred Years since, it was common for Vineyards to flourish in England. The famous old Record, call'd *Dooms-day Book*, which is a kind of General Survey of Church Lands, and their Product, abounds in remarkable Proofs of the Matter before us; and mentions, particularly, how many Acres of Vines grew at *Ely* in *Cambridgeshire*, and *Leigh* in the Hundreds of *Essex*; which are both so near *London*, that we chose those two Places in Preference to others. Further, *William* of *Malmsbury*, who liv'd before the Conquest, in describing the Blessings of *England*, takes occasion to mention the *Wine*, that was every where made in his Time, with this Extraordinary *Encomium*, That it was equal to the *French Wine*, in every Thing to be lik'd, and infinitely exceeded it in this one Particular,

lar, that it was not so subject to an *unpleasant Tartness*.

This may serve to convince the most diffident, that *once we had Wine made among us*: It remains to give a Guess at the Cause, why it was not continued to our Time. And this appears easy from Circumstances to be met with in our History; and the Consequences, which may be reasonably subjoin'd, as the Natural Effects of such Causes.

When William the Conqueror, by his Acquisition of England, annex'd to its Dominions the Dukedom of Normandy, and its spacious Dependancies, it is reasonable to believe, that Himself, and his Successors, did, by all means, endeavour to establish a good Correspondence, and mutual Affection between his New People and his Old. The most effectual way to do this, was, by some means or other, to make England beholden to his Native Dominions, for a yearly Supply of some Product we wou'd least Care to want: Our Ancestors are recorded for a *far'd Hospitality*: The want of good Wine, that Support of good Humour, cou'd never be brook'd by Men so dispos'd; wherefore it was but to find some Pretence for destroying the Vineyards of England; and it was a Consequence that the Merchants of Gascoign, and other French Provinces, might pour in upon us a yearly Inundation of Wine, to supply the Demands which the Law made it penal to furnish at Home.

Pretences

Pretences cou'd never be wanting, to make this go down with the Multitude, as a *National Benefit*; the *Encouragement of Trade*; the *Increase of Navigation*; the greater *Aptness of Soil* in those Countries, and the *Witberast of Novelty*: All these, and a great many more such Inducements, were sufficient to quiet the Clamour of the People, who were most *immediately Sufferers*, by the *Destruction of their Vineyards*: And the discontinuance of Planting them, being once grown a *Custom*, Length of Time, wearing out the Remembrance of the *Truth*, the Distinction is not easily made between not being *able*, and not being *suffer'd*.

There is nothing *surprizing*, or *improbable* in this Imagination; and it is not yet out of some Peoples Remembrance, when a *Step very like it* was taken, and the Growth of *Tobacco* in *England* was put down by Act of Parliament, for *Advancement of Trade*, and *Encouragement of Virginia*; tho' many of our Counties, and *Gloucestershire* in particular, did not only produce *Tobacco* more pleasant, and fit for our Constitutions; but by that means made more Profit of their Lands, beyond all Comparison, than by any other Use they cou'd put them to.

Now if, hereafter, by some unforeseen Accident, the *Records* shou'd be *lost*, which give Light to this Matter, it is not unlikely, but *Five or Six Hundred Years* hence, when *Virginia* may possibly, by the Chances of Time, be under a distinct Jurisdiction,

dition, it will generally be believ'd, that the *Climate of England is unfit for Tobacco*, and that *therefore* they are forc'd, at such a yearly Expence, to be supply'd from *America*.

But whatever may be thought of the *Vineyards of old*, the Matter in Hand will be out of Dispute, if the Reader informs himself, which he easily may, That even *at this very time there are Vineyards in England*, from whence has been made most agreeable *Wine*, in Quantity sufficient to furnish a great deal to the *Vintners of London*: As a Proof of which Fact, we need only mention *Sir William Basset's known Vineyard near the Bath*, *Mr. Howard's by Darking in Surry*, and that of *Sir John Mordaunt of Blackheath near London*.

But tho' these, and some others, do often *hit well*, they are many times observ'd, and especially in unseasonable Years, to *deceive* very much the *Expectation* of their *Owners*; which Disappointments arise from *two Principal Causes*; their not choosing *Grapes* the most *fit* for our Climate, and their Planting the *Vines* in a *manner as improper*.

If any Man therefore wou'd *successfully* nourish a Vineyard, he need only give himself the Trouble of *observing* the Directions which follow.

The

The *Situation* shou'd face the *South-East*, or *South-West*; the *Soil* shou'd be *Gravelly*, *Light*, *Sandy*, or *Stony*; the *Side* of a *Hill* should be chosen, if possible, but *plain Ground*, in *our way*, will be almost as serviceable.

The *Grapes*, which are proper for *England*, are such, as are *earliest* ripe, most naturally *hardy*; and have small jagged *Leaves*, which shade not too much, but let in the *Sun* with a double Refreshment; such as these are the *Canada Grape*, the *Vine* of the *Rhine*; the small *Muscadel*, and above all, that sort which abounds in the *Vineyards*, which lie every where round the *City* of *Paris*, from whence we may be furnish'd with well rooted *Setts* for about *Six-Pence* the *Hundred*, not reckoning in the Charge of bringing them over.

But we wou'd recommend, instead of these *small Setts*, which are commonly bought, the use of large full grown *Roots*, which are ready cut up and thrown away about *Paris*, for the planting their *Vineyards*: For these may not only be had at as reasonable a *Price* as the other, but being pack'd up in *Boxes*, with *Earth* thrown between them, will come over without much expence; since *four Hundred* such *Roots* are sufficient to plant a whole *Acre*; but will also shoot strongly, and bear *Fruit* the *first Summer*; whereas on the contrary, the *small Setts*, which are commonly planted, bear nothing at all in *three Years*, and even then produce sparingly.

These Roots must be planted in long shallow Trenches, at the distance of Ten Foot one from the other; and the most flourishing Branches, as they rise, must be suffer'd to run, like our Peaches and Apricots, on the most Sunny side of a low slight Wall, about Three Foot in Heighth, till they meet one another; after which, all superfluous Shoots must be kept down by Pruning; and if the Top of the Walls were made to *hang over*, by being built about Three Inches broader than the rest, they wou'd afford an infallible Security against all the *Blasts*, and ill Accidents, which frequently ruin an *un-guarded* Vineyard.

The Walls will by no means be so expensive as may be thought, because they are built of the *Pebbles*, *Flints*, and rough *Stones*, which are every where found upon the Spot, in Lands proper for *Vine-bearing*, and plaister'd together with common Clay and Water: They must be built about Eight or Ten Foot from each other, so as one may not suffer by the Shadow of its Neighbour. They shou'd stand in such manner, that the *Allies* between them may be open all Day to the Course of the Sun, and by that means the Vines will be also defended by the Walls at their Backs, from all noxious *Winds*, which might otherwise injure them: The *Allies* shou'd be cover'd, till within a Foot of the Vines, with a smooth Coat of Gravel, or Sand, or hard *Stones*, roll'd in, and kept free on the Surface from Grass, Weeds, or any Growth

Growth whatever: All which is presented to the Eye, as correctly as could be drawn, in the Cut which is prefix'd to this *Essay*.

Thus the *Vines*, being shelter'd from *Winds*, kept warm from all *Frosts*, not suffer'd to waste themselves by unprofitable shooting, but kept low, and within the full Influence of the *Sun's* strong *Reflection* from the *Walls*, and the *Al-lies*, will be Proof against any of the ordinary Accidents, and Annually produce you a plentiful Vintage, before the short Days, and lost Vigor of the *Sun*, can discourage them in ripening.

It may possibly be a *Spur* to the *Undertaking*, if besides the great *Pleasure*, which would follow this Improvement, we observe what a *Profit* would, as surely, attend it. To which End we need only relate, what is known for a Truth in all Parts of *France*, and most other Countries, that *Sixteen Hogheads of Wine* is the common Increase, which, one Time with another, they expect from an *Acre*.

If, notwithstanding, these Cautions, it should sometimes so happen, that by unseasonable, or extraordinary *Wetness*, or *Coldness* of *Summers*, the *Grapes* should not *Ripen* so kindly, as they ought; the *Germans* have a Practice, which being, in such Case, made use of, were an easy and infallible *Remedy* against it. They have *Stoves* in their *Cellars*, which they always keep hot by large *Fires* within them; and, by that means,

means, diffusing an equal and powerful Warmth among all their Vessels; their Wines, when they chance to be made of *Green Grapes*, work more kindly than ordinary; and, by an Artificial Digestion, throw off, and divest themselves of the Rarrefaction. Other Nations produce the same End by a Means somewhat different; for they boil up their Must, or New Wine, till, by considerable Evaporation of the watry Part, the Remainder assumes a new Colour, and becomes better body'd, and of admirable Relish.

F I N I S.

E R R A T A.

PAG. 21. lin. 9. for *Whitfers*, read *Whitsters*. Pag. 27.
lin. 26. for *Substance*, read *Surface*.



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